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ABSTRACT

Research and theory on language acquisition and language socialization are examined and compared. The language acquisition perspective is that the central question is how children acquire forms and patterns of language, with syntax at the core, so early and so rapidly. From the viewpoint of language socialization, the issue is not only of quisition of linguistic forms and principles but also of t.. learning of the real-world meanings and social functions of these forms. The two approaches define the problem of what is to be learned very differently and have correspondingly different methods and research questions. The discussion considers research on the effects of different aspects of adult-to-child speech on child language, including adult modification of prosodic features, manipulation of non-prosodic features, adult syntax, and adult questions. Selected language socialization research, which emphasizes pragmatics and discourse rather than syntax, is also reviewed. It is proposed that a more fruitful approach would be to combine the two perspectives, specifically by language acquisition researchers' use of language socialization methods to address syntax development. (Contains 60 references.) (MSE)

Language Acquisition and Language Socialization (Yuyan huode yu shehuihua)

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The present paper is an attempt to apply the spirit and the ideas of Cultural Psychology to the problem of language acquisition. It does not offer a set of concrete methods for doing language acquisition research. Rather, it is a discussion of the relevance of cultural psychology to a long-standing question in language acquisition research: the role of input, or adult-to-child speech, in children's language development.

The notion that adult language (and that of any other competent speakers, including other children) may have an impact on the child's acquisition of his or her "mother tongue" may be obvious to the point of banality. However, researchers who attempt to understand the development of language abilities by the child have found "the input question" to be at the very center of their controversies. The present paper is an attempt to lay out the fundamental issues in the debate on input and acquisition and to suggest directions for its resolution.

I. The Problem of Language Development as seen from Two Perspectives

a) Developmental Psycholinguistics

The problem of language development, according to modern psycholinguistics, is that, despite wide variations in the languages of the world and variations in the quality and extent of adult-to-child speech both within and between language communities, every normal child learns to speak the language of his or her community. The 'problem' is that they acquire language in a relatively short amount of time (the first few years of life), yet do so with a proficiency of use and judgment that is practically unattainable by non-native speakers, regardless of the number of years of intensive study that they have spent to learn the language. Specifically, it

is the child's seemingly effortless acquisition of the grammar, with syntax at its core, that is of the greatest interest and is the most puzzling when one considers the implicit conditions under which it is acquired.

b) Language Socialization

For language socialization theorists, the problem is not only one of acquiring the principles which relate linguistic forms to each other, but also to the real world meanings and social functions of these forms (Ochs, 1988, p.15). These meanings and functions, moreover, are embedded in sociocultural knowledge. Similarly, advocators of the language socialization approach point out that "understandings of the social organization of everyday life, cultural ideologies, moral values, beliefs, and structures of knowledge and interpretation are to a large extent acquired through the medium of language" (ibid.). Thus, they claim language and socialization are inseparable for children learning their native languages in their native cultures. One cannot discuss the problem of acquiring language in the absence of the socialization processes in which it is embedded, nor can one discuss socialization in the absence of language. Syntax, which is a system of rule-based symbolic representations, is not the most important feature of language to be acquired, nor is it the one that should be focused upon in studies of children's language development. Rather, the focus is on the "referential and non-referential meanings and functions" of linguistic forms.

Language, for socialization theorists, is a set of activities that guide children and adults in their interactions with other members of their sociocultural environment. The 'problem', therefore, is to go about explaining how these interactive systems work in the adult community and how children are brought into them.

c) Combining Perspectives

These two perspectives, language acquisition and language socialization, define the problem of "what is to be learned" in very different ways. As a result, their methods and specific research questions vary dramatically, despite the fact that both sets of researchers are presumably addressing the same issue: how does a child learn his or her native language? I do not wish to claim that either definition of the problem is inherently more interesting or more likely to lead to an understanding of how children learn to speak and/or how to help children with this process. Rather, I would like to discuss how the methods and definitions of these two perspectives can be used in fruitful combination. In particular, I would like to discuss how language acquisition researchers (i.e., those who follow the tradition set by Brown, 1973 and others) can make use of the perspective and methods of language socialization to address issues of syntax development. I have chosen to specifically address the question of syntax development rather than vocabulary development or other aspects of children's language development because syntax appears to be the "last frontier" for a culturally-oriented psychology. Several studies examining the effects of adult language and environment on children's language development have shown effects on almost every other aspect of language, but not syntax. Most of these studies, however, have looked at the effects of specific factors in adult syntax on child syntax and failed to come up with significant findings. It is this issue and the accepted practice of searching for influences of one factor on another at the same level of analysis, without considering the effects of factors at another level of analysis, that I wish to address. For as LeVine (1970, p.597) pointed out over twenty years ago in discussing the state of

research in child-rearing and personality development:

> It is all to easy to find support of simple causal hypotheses by limiting one's investigation to a few variables rather than looking at the larger structure of relations in which they are embedded.

Let us begin, then, with a review of contemporary psycholinguistic data and positions on the effects of adult-to-child speech.

II.The Psycholinguistic Data

Like almost every other issue in developmental psychology, there are two main positions on how a child comes to learn his or her native language: the nativist and the empiricist.

For a hardline nativist such as Chomsky, the role of adult-to-child speech is simply to inform the child of the specific grammar he or she is supposed to be acquiring. Grammar itself, claims Chomsky does not have to be "learned". Rather, the grammar of any particular language is said to be one of a set of possible human grammars and this set of possible human grammars is assumed to be "a fixed, genetically determined system of some sort [which] narrowly constrains the forms that [these grammars] can assume" (Chomsky, 1980, p.35). For Chomsky, therefore, the "input" question is irrelevant and the real problem is:

> What are the initial assumptions concerning the nature of language that the child brings to language learning and how detailed and specific is the innate schema (the general definition of 'grammar') that gradually becomes more explicit and differentiated as the child learns the language? (Chomsky, 1965, p.27).

Many researchers have followed this tradition and set about posing the Chomskyan question in their experimental work. However, since Chomsky's question excludes the role of the environment at the outset and the goal of the present paper is to examine differing positions on the role of input, I will not be discussing the hard-line nativist position any further.

Instead, the data to be reviewed in the present paper will include only studies which address adult-to-child language as a possible contributor to the child's linguistic development. However, even these studies have had difficulty in demonstrating that adult-to-child speech can have significant effects on the child's development of grammar. According to Hoff-Ginsberg and Shatz (1982), in an early review of the input data, although there are demonstrations of input effects on many aspects of child language, "the child's accomplishment of syntax is considered by many to provide the greatest challenge to empiricist accounts of language acquisition." It is a challenge that has yet to be met.

The main argument of the present paper is that we need to expand our scope when looking for possible contributors of adult speech on child language. Thus, rather than just limiting ourselves to a search for syntactic features in adult-to-child speech when we are interested in the effects of adult-to-child speech on child syntax, I am arguing that we need to broaden our search to also include non-syntactic features of adult-to-child speech. The effects may not necessarily be direct, nor need they be constant. Rather, as children's language development proceeds from earlier to later stages, the same aspects of adult-to-child speech may have <u>different</u> effects on the child's syntactic development. This may seem obvious to some and even acceptable in a more maturationist account, but its implications for research design and for understanding the usefulness of the child's linguistic environment have generally not been carried through. Let us begin, then, by considering the effects of different aspects of adult-to-child speech on child language.

<u>(i) Prosodic Modifications</u>

For English, and at least French, German, Italian, Japanese, Mandarin Chinese, and Spanish, there is sufficient empirical evidence to support the statement that adult native speakers alter the prosodic features of their language in ways that could be beneficial to their preverbal infants (Ferguson, 1964; Blount & Padgug, 1977; Stern, 1983; Grieser & Kuhl, 1988; Fernald, Taeschner, Dunn, Papousek, de Boysson-Bardies & Fukui, 1989). However, which aspects of these alterations in the basic rhythms of adult speech may be facilitative of which aspects of child language is still undetermined.

Briefly, the findings across languages are that both mothers and fathers speak with a higher pitch, greater variation in pitch, produce shorter utterances, and have longer pauses when they are addressing their preverbal (2- to 14-months-old) infants (Grieser & Kuhl, 1988; Fernald, et.al., 1989). This is true even in the case of Mandarin Chinese, a tonal language for which changes in prosody can alter the meaning of a phonetic segment such that a different word is produced.[1] There are, however, differences across languages and across speakers, with American, white, middle-class English speaking parents showing the greatest increases in pitch and range, and Japanese-speaking parents showing no expansion in their range of pitches. Instead, Japanese and German parents tend to prefer short, higher-pitched utterances with tag particles such as "-ne" in Japanese or "gel" in German, equivalent to ".a" or ".ya" in Chinese ("hmm", "unh" or "eh" in English).

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[1] In my own pilot data (Tardif, 1990) "zou3" was altered various times to very high-pitched first and second tone versions (i.e., "zou2" and "zou1") in one mother's sample when she was watching a wind-up car together with her 12-month-old infant. At other times, she produced this word in its standard, third tone, form.

These tags function as a marking of affection to reassure or encourage the child to respond (Clancy, 1985), and are also present in Mandarin adult-to-child speech[2]. Across all languages, moreover, fathers show less of an increase in pitch, but instead tend to increase the length of pauses between their utterances (Fernald, et.al., 1989).

Why these alterations might exist and what their usefulness might be for an infant who has not yet begun to speak his or her native language are open questions. Grieser and Kuhl (1988), following from Gleitman, et.al. (1987), put forth three possibilities. First, pitch contour, in general, marks major linguistic boundaries (i.e., word, phrase, and sentence). Thus, it is argued that the expanded pitch contours of motherese makes these boundaries even more noticeable, thereby aiding the infants' in learning how to parse the relevant linguistic units from an utterance. Second, the overall higher pitch and expanded range of pitch are perceptually distinctive and salient. They are a signal for the infant to pay attention and to notice that it is "baby's turn", as this style is used solely for communication with the infant. Third, perhaps these pitch contours and variations are pleasurable for the baby and therefore lead to a "willingness" to interact with the parent linguistically, on the basis of this positive affect.

Grieser and Kuhl cite experimental evidence which is relevant to these hypotheses. In sound discrimination tasks, for instance, infants show

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[2] One other feature of Mandarin is reduplication. For example, most Mandarin speakers would say "gou3" or even "xiao3 gou3" when talking to an adult, but "gou3-gou3" or an elongated and higher pitched "xiao3 gou3" when speaking to a language-learning child. English speakers would also mark this word, but not by reduplication. Instead, English speakers would change the adult word "dog" into "puppy" or "little doggy", produced with a much higher pitch than one would use when addressing an adult.

increased performance when the task involves "motheresed" as opposed to regular speech (Karzon, 1985). In addition, infants demonstrate a preference for "natural" pauses (at phrase boundaries) in motherese, but show no preference between natural and unnatural (within a phrase) pauses in regular adult speech (Kemler-Nelson, et.al., 1989).

These two findings are significant in their implications for the effects that motherese can have on perceiving the fundamental units (words and clauses) for <u>both</u> semantic and syntactic development at very early stages in the language learning process. They are not direct evidence for the <u>explicit</u> facilitation of syntax or semantics. However, the relevant data for such a hypothesis would not be impossible to obtain. What is necessary is evidence that variations in the pitch and pitch contours of maternal speech to infants in their first, preverbal year are related to corresponding variations in the comprehension of grammatical units when children begin to show evidence of consistently comprehending their first words.

One study (Stern, Spieker, Barnett & McKain, 1983), which involved observations of the same infants and their mothers from the neonatal period through to age 2, when the infants were already talking, emphasizes the importance of considering the functional significance of prosody as children's linguistic abilities improve. Specifically, Stern and colleagues found that the characteristics of motherese change as the infant gets older, with a peak in repetition and pitch changes in speech addressed to 4-month-old infants. There was, however, no reporting of specific child language variables in this study. If there had, then it would have been the only naturalistic study relevant to linking the effects of motherese prosody to child language acquisition. Nonetheless, these reported changes in motherese

prosody are important and worthy of careful consideration. A study which replicated Stern's design and also included data on child speech comprehension and speech production would be an important contribution towards answering the question of how effects of adult-to-child speech may vary as a function of the child's concurrent language abilities and processing biases.

(ii) Non-Prosodic Effects

In addition to altering the rhythmic features of their speech, English speaking parents from middle-class backgrounds also modify sentence length and complexity, semantic complexity, and pragmatic features of their language to match their child's comprehension and to be slightly ahead of their speech production abilities (Foster, 1990). The fact that English speaking adults tend to "fine tune" their speech to the comprehension abilities of infants and children is not controversial. Under intense debate, however, is the effects that such finely tuned modifications have on the child's language. Is it the case, for instance, that these parents are unconsciously employing an effective teaching strategy to aid their children's language learning? If so, what aspects of their children's language are they aiding and how direct is this process? Or is it merely the case that their Anglo-Saxon heritage and Western individualist ideologies have instilled an over-responsive politeness in these parents and an urge to elevate their children's capacities such that they modify their language to meet the genetically controlled, emergent linguistic abilities of their children? And what about other languages in which parents do not modify their speech (e.g., Kaluli, certain dialects of American English, etc.); are these evidence that specific features of parent-to-child speech are not important for the child's

syntactic development?

The following studies represent various attempts to answer these questions for English. My own research in progress (Tardif, in preparation) is an attempt to address this issue for Mandarin Chinese. Together, these studies, as well as more recent ethnolinguistic approaches to examining "input", suggest that we may have to expand the range of variables and our methods of analysis in order to provide an adequate accounting of the roles that adult-to-child speech have on child language development.

(ii-a) Effects of Adult Syntax on Child Syntax

One of the first studies to examine specific, gramatically relevant, aspects of motherese in conjunction with child language growth was a correlational study that is often cited as evidence for a very minor impact of mothers' speech on their children's language development (Newport, Gleitman & Gleitman, 1977). This study involved fifteen English speaking mothers and their 12- to 27-month-old daughters. The speech of mothers and children were recorded and transcribed in two 2-hour-long sessions spaced six months apart. Approximately 100 utterances from each mother to her child during the first visit were selected for analysis. These utterances were coded for the following features: well-formedness, sentence length, structural complexity, psycholinguistic complexity, sentence type (declarative, imperative, etc.), intelligibility, frequency of self-repetition and imitation of the child's utterances, deixis (i.e., that, this, etc.), and expansions. These first-visit analyses of the mother's speech were then correlated with features of the child's speech during the same visit and six months later at the follow-up visit. The child's language was coded at both visits for its syntactic complexity. This was measured by

estimating the child's mean length of utterance (MLU), mean noun- and verb-phrase frequencies and lengths, noun-phrase inflections (i.e., plural marking, etc.), and auxiliary structures (i.e., use of modals and tense marking).

Overall, the most consistent findings from the Newport, et.al. study are that only the frequency of yes-no questions and of deictic utterances were positively related to developments in the child's syntactic capabilities from visit one to visit two. Specifically, the frequency of mother's yes-no questions was highly correlated ($r=.88$, $p<.001$) with increases in the child's use of auxiliaries during the six month interval between visits. Maternal use of deictic utterances was correlated with increases in the number of noun inflections per noun phrase, although the correlation was not as high ($r=.58$, $p<.05$). The only significant negative correlations were between mothers' use of imperatives and child auxiliary development and between maternal repetitions/imitations and child auxiliaries. None of the other adult variables showed reliable effects on child syntactic growth. Although Newport, et.al. provide additional analyses and descriptions of adult-to-child speech, the above findings were of the greatest significance in that they led the authors to conclude that adult-to-child speech does not appear to have an effect on the child's development of "grammar" in its universal sense (i.e., the development of longer utterances and increases in the number of verb- and noun-phrases in each utterance). Rather, they claim that it is only the language-specific features of auxiliaries and noun inflections that appear to be affected. A "mother has little latitude to teach her child about the language", Newport, et.al. (p.147) concluded, "but she can at least improve his English."

This study and the position sparked a series of replies (Furrow, Nelson & Benedict, 1979) and counter-replies (Gleitman, Newport & Gleitman, 1984; Furrow & Nelson, 1986) in the field and have now resulted in improvements in data collection methods for assessing maternal input and child speech, as well as a more sophisticated set of questions for examining which aspects of parental language may be helpful and how these effects might be observed. These improvements and new questions have not, however, resulted in a resolution of the basic issue that Newport, et.al. raised. That is, does input have an effect on the child's acquisition of "language" (qua grammar) in its universal, Chomskyan sense, or do the effects lie only in the acquisition of language-specific properties?

To date, the only consistent positive finding for effects on child syntax remains that increased use of questions lead to greater, and perhaps earlier, use of auxiliary verbs (e.g., in English, have, do, can, may, might, etc.). Although this is a consistent finding across most studies[3] that have examined this relationship (Newport, et.al., 1977; Furrow, et.al., 1979; Gleitman, et.al., 1984; Furrow & Nelson, 1986; and Hoff-Ginsberg, 1985, 1986, 1990), the reasons for and the status (universal vs. specific) of this effect

[3] Note that Barnes, et.al. (1983) have not replicated this finding. Rather, with a larger sample of 32 British children and parents from a wider range of social classes, Barnes, et.al. found that parental directives correlated significantly with the lengths of their 2-year-old's sentences, as well as with their semantic and syntactic complexity. Following the reasoning of Newport, et.al. (1977), this suggests that there are effects of adult-to-child speech on children's development of "language". Maternal questions, however, did not show any direct relationships with children's speech in this study, although they were co-correlated with other factors of maternal speech that did show significant effects. Children's uses of auxiliaries, however, were not independently assessed in this study. Thus, the extent to which it actually contradicts the American findings is not certain.

are still under debate.

(ii-b) Adult Questions and Child Syntax

Hypotheses

Several alternative hypotheses exist to explain the role of adult questions on the child's development of the auxiliary system. First, there is a variation on the "innate syntax" approach which claims that this effect is only one of learning the vocabulary of "closed-class" items (i.e., language-specific function words such as "ba3", "bei4", etc. in Chinese or auxiliary verbs in English), and that maternal yes-no questions simply contain a greater frequency of these items than declaratives or imperative sentence forms.

Second, as proposed by Newport, et.al. (1977), yes-no questions in English always have an auxiliary in the initial, stressed position of a sentence (e.g., "Do you want some milk?", "Can I have it?", etc.). This may aid children's acquisition of the item from question forms as opposed to other sentence forms where the auxiliary is embedded in the middle of the sentence (e.g., "You can have it."), because it conforms to their predetermined processing preferences, or "operating principles" (cf. Slobin, 1973, 1985: "pay attention to the beginnings and the ends"). The third hypothesis is that this effect has nothing to do with the child's internal syntax or operating principles per se, but that there is a general pragmatic effect of questions in eliciting conversation from the child (cf. Hoff-Ginsberg & Shatz, 1982; Hoff-Ginsberg, 1986). Under this hypothesis, questions would have an effect on the auxiliary simply because they elicit a response and elicit more and more appropriate (i.e., auxiliary-containing) responses as children become more capable of making them. In fact, there

appears to be some evidence (Ervin-Tripp, 1976, 1990) that children's first usages of auxiliary verbs occur in response to adult questions before they have full command of auxiliaries in isolated sentences.

Finally, Furrow, et.al. (1979) suggest that the effect of yes-no questions on child auxiliary development may be a semi-artifactual effect of a "positive interactive style". More sensitive mothers, they argue, would be more likely to ask their children what their physical and emotional needs were, rather than just assuming them, and hence be more responsive as well to their linguistic needs.

Evidence

The Frequency of Closed-Class Items Hypothesis

We have no direct evidence for the first hypothesis, that input is useful only for the initial acquisition of closed-class vocabulary items. In fact, the data from Barnes, et. al. (1983) appear to contradict this hypothesis with their finding of a correlation between maternal declaratives and children's sentence length. We do have direct experimental evidence for the frequency issue, however, and this does not support the hypothesis that increasing only the frequency of these items will lead to greater auxiliary development.

In a direct test of the frequency hypothesis, Shatz, Hoff-Ginsberg and MacIver (1989) presented children with sentences from one of three experimental conditions once per week over a period of six weeks. A total of sixty sentences about toys containing the modal auxiliary "could" were presented by an experimenter during each half-hour play session over the six weeks, with children randomly assigned to one of the following conditions: (1) Questions, with could in the sentence-initial position (e.g., "Could the

girl slide down?"); (2) Declaratives, with could in a sentence-medial position (e.g., "This one could roll."); and (3) Mixed, with 30 declaratives and 30 questions. A control group also participated in weekly play sessions with the experimenter, but did not receive any sentences with the word could. Consistent with both the pragmatic and the "pay attention to beginnings" hypotheses, only the Questions-only condition showed a significant increase in the use of auxiliaries. Moreover, this effect generalized to other modal auxiliaries (e.g., should, can, may, etc.), but not for non-modal auxiliaries like "do", "is/are", and so on. The presentation of declaratives and the mixture of declaratives and questions resulted in lower usage of modals than even the baseline control group, although this difference was not statistically reliable. Of note is that the Questions-only condition also resulted in a long-term effect on children's increased use of modals that persisted at least 4 months beyond the completion of the experimental enrichment period. This is particularly dramatic, given that the play sessions occurred in the researchers' laboratory and the follow-up sessions occurred in the children's homes, under much more naturalistic conditions.

The Operating Principles Hypothesis

If the "operating principles" approach (cf. Slobin, 1985) was the major factor involved in the effects of adult questions on children's auxiliary development, there should be a differential effect between yes-no questions versus Wh- questions. In yes-no questions (e.g., "Do you want up?"), the auxiliary is fronted and thus appears in a position that is favored by the "pay attention to beginnings and ends" principle. In Wh- questions (e.g., "What do you want?"), the auxiliary is neither fronted nor final and thus is not in a favored position. Hoff-Ginsberg (1985) tested this hypothesis with

a sample of 22 two-and-a-half year-old children and their parents and discovered an even stronger effect for mothers' Wh-questions than for yes-no questions. Both types of adult question forms, however, were beneficial to children's auxiliary development, which suggests that there is something about questions themselves that appears to be beneficial to English-speaking children's development of auxiliary verbs.

The Conversation-Eliciting Hypothesis

In an attempt to differentiate further the "conversation-eliciting" hypothesis from a general "syntax-rich source of data" hypothesis about maternal language, Hoff-Ginsberg (1990) reanalyzed her 1986 transcripts for more detailed contingencies of parent and child speech. Specifically, she chose four categories (real questions, verbal reflective questions, self-repetitions, and acknowledgements of declaratives) of maternal speech that were significantly related to measures of child syntax (the first three, positively; the last, negatively), and contrasted these with a measure that was found to be unrelated to child syntax development (frequency of maternal declaratives[4]). Each of these utterances were also coded for general syntactic richness (MLU), as well as the presence of the specific syntactic variables that were relevant for children (i.e., mean number of auxiliaries per verb phrase for questions, and verb phrases per utterance for self-repetitions/expansions). Finally, each of these utterances were also coded for the presence or absence of adjacent child speech, with percent totals computed for each of the categories.

[4] However, note that in Barnes, et.al. (1983), this frequency of maternal declaratives is also positively related to child syntax development. In Hoff-Ginsberg's (1986) data, though, this relationship does not exist, making this a plausible contrast for her data but not for Barnes, et.al.'s.

Hoff-Ginsberg's results are rather compelling. Both real questions and verbal reflective questions showed higher rates of adjacent and related child speech than did declaratives. In addition, for each of these categories, the correlated aspect of child syntax (auxiliaries per utterance) were also more frequent in these types of maternal utterances, thus lending rather strong support to the hypothesis that the effectiveness of maternal speech for child syntax development is related to two effects: (1) eliciting conversation from the child and perhaps thereby encouraging him or her to focus on the input; and (2) the provision of a rich data base for the specific aspects of syntax that are being acquired. One of the questions that these data raise, however, given the fact that not all linguistic communities have special maternal speech registers, is the cross-cultural and cross-linguistic relevance of such a style. To this, Hoff-Ginsberg suggests:

> Future research needs to investigate the relationship between the properties of the language-learning environment and children's language development in other sociocultural environments in order to construct a more generalizable account of how stylistic aspects of adults' talk to children contribute to the children's acquisition of syntax. (Hoff-Ginsberg, 1990, p.96)

Summary

Before going on to a discussion of language learning in other sociocultural environments, I would like to summarize the findings from the aforementioned research. First, adult-to-child speech contains prosodic modifications that, when compared to regular adult speech: (1) increase prelinguistic infants' attention to phrase boundaries; (2) improve infants' performance on sound discrimination tasks; and (3) change with the age of the infant. In order to support the claim that prosodic features of adult-to-child speech can help children's development of syntax, future research would have to address this question specifically and examine how such prosodic

modifications may be related to the infant's later language comprehension and production abilities.

Second, for English speakers, an increased frequency of maternal questions leads to improvements in children's development and use of auxiliary verbs. This effect does not appear to be related to the mere increase in the number of auxiliaries in English question forms, nor does it appear to be solely the result of children's processing preferences for fronted auxiliaries in yes-no questions. Rather, it appears to be related to a general conversation-eliciting effect of adult-to-child questions and to the provision of a rich data base that is specific to the child's concurrent level of syntactic development. Whether this relationship holds for speakers of other languages and in other sociocultural environments is an open question. However, in order to examine this issue properly we must obtain data from other languages in which question forms may differ and for which the relevant syntactic forms may be something other than auxiliaries. Once we have done this, perhaps we will be in a better position to return to the question of whether adult-to-child speech can aid a child in learning "language" or just assist this child in better speaking his or her own native language.

III. The Language Socialization Approach

In the late 1970's and early 1980's, a sociolinguistic approach to the development of children's language emerged which addressed both the broader issues of "culture" and the specific details of "language" in the development of children's language abilities and uses. Moreover, this approach emphasized that the categories of relevance to the community must themselves

emerge from the data and be interpreted through a process of discourse analysis[5] and repeated clarification discussions with informants. The underlying assumption in this approach is that talk itself is "a kind of act, and speech acts can have powerful social consequences" (Quinn & Holland, 1987, p.7). It is different from the psycholinguistic approach to language acquisition and the "environmental effects" (i.e., motherese) literature reviewed above in that it focuses on the analysis of interactive conversational structures and the cultural meanings embedded within them, rather than considering meanings and syntax as abstract grammatical categories and rules expressed in isolable sentences.

Ways with Words (Heath, 1983), the report of a long-term, in-depth ethnographic study of two Piedmont Carolina[6] communities from 1969 to 1978, is the most extensive example of tne language socialization approach for English speaking children. Heath's work, together with that done by Ochs in Western Samoa and by Schieffelin in Papua New Guinea form the core of a modern anthroplogical approach to child language and socialization. Throughout, the methods are ethnographic descriptions and transcriptions of the lives and languages of the community. The guiding framework is one of sociohistorical determination of the structures and values of the community and the language that its members acquire and use. In Heath's words:

> This book [and the approach] argues that in Roadville and Trackton the different ways children learned to use language were dependent on the ways in which each community structured their families, defined the

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[5] See Austin (1965) Searle (1969, 1980), and Grice (1975) for the beginnings of the discourse analysis approach and Brown & Yule (1983) for a general overview of the theory and methods of discourse analysis.

[6] Located in the east-central section of the United States, southwest of Washington, D.C..

roles that community members could assume, and played out their concepts of childhood that guided child socialization. In addition, for each group, the place of religious activities was inextricably linked to the valuation of language in determining an individual's access to goods, services, and estimations of position and power in the community. In communities throughout the world, these and other features of the cultural milieu affect the ways in which children learn to use language.

Heath illustrates her approach through a comparison of Roadville and Trackton, communities with children who, after desegregation[7], started attending the same schools in the town of Gateway. The impetus for this work was not directly motivated from a theoretical stance on the problem of language learning. Rather, it grew upon itself as teachers and community persons attended the local college where Heath was teaching in a search for answers to the problems of communication that suddenly appeared in Gateway's newly desegregated schools. Heath was interested in such problems herself, but became involved in the project primarily because of the questions and urgings of her students. The root of Gateway's problem, she felt, was the different ways in which children were socialized to use language in the two communities. Thus she set out, together with her students, to observe the children in their communities.

Right from the beginning, she found, there were dramatic differences in the ways in which children were conceptualized and brought into the two communities. Trackton children arrived home in the hospital-provided bassinet box to a crowded household where they slept with their parents until about the age of two with no time or place to be alone, and had no toys for these first two years other than what was generally lying about the house.

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[7] The American school system used to assign black and white students to separate schools. This was later declared unconstitutional and the resulting practice of assigning white and black students to a single school, beginning in the early 1960's, was called "desegregation".

Conversely, Roadville children's arrivals had been planned for months in advance with "stork showers" and the arrangement of a brightly decorated room and crib for the baby and the assumption that babies need time to be alone and to explore their child-centered worlds. In addition, Trackton children were thought of as belonging to the community at large, who expected them to "learn" about language and its variations and people and their variations and about growing up, in general, by themselves. Roadville children, however, were primarily members of their own nuclear families (even though visits with other family members and friends were important) and it was the parent's responsibility to "teach" these children how to talk and to talk 'right' in preparation for school, church, and just being polite with non-family individuals.

The distinction is drawn out nicely in the words of the community members themselves. Annie Mae (Trackton), when talking about her grandson, Teegie, says:

> He gotta learn to know 'bout dis world, can't nobody tell 'im. Now just how crazy is dat? White folks uh hear dey kids say sump'n, dey say it back to 'em, dey aks 'im 'gain 'n 'gain 'bout things, like they 'posed to be born knowin'. You think I kin tell Teegie all he gotta know to get along? He just gotta be keen, keep his eyes open, don't he be sorry. Gotta watch hisself by watchin' other folks. Ain't no use tellin' 'im: 'Learn dis, learn dat. What's dis? What's dat?' He just gotta learn, gotta know; he see one thing one place one time, he know how it go, see sump'n like it again, maybe it be de same, maybe it won't. He hafta try it out. If he don't be in trouble; he get lef' out. Gotta keep yo' eyes open, gotta feel to know. (p.84)

Peggy, a Roadville mother describing her son, Danny (I), and how she, herself (II), learned to talk responded as follows to Heath's questions:

> (I) I figure it's up to me to give 'im a good start. I reckon there's just some things I know he's gotta learn, you know, what things are, and all that. 'n you just don't happen onto doin' all that right. Now, you take Bobby [the child of her younger sister, Betty], we, Betty 'n me, we

this?" type of teaching questions so admonished by Annie Mae, nor even as directives and scoldings in the ways described in the Roadville white-middle-class studies and the classic motherese literature. Instead, they use questions as openers for analogies and stories about events in the community, or as accusations (similar to Roadville's scoldings) to elicit either a nonverbal lowering of the head or a creative story to distract the questioner from the matter. School teachers, however, make use of many of the Roadville-type of teaching questions and cannot comprehend why Trackton children never seem to be able to respond to them and instead make up "lies" and tell tall stories rather than apologize when confronted with something that the children are obviously in the wrong about (Heath, 1982).

Heath reminds us throughout that what is important in understanding the differences between child speakers from these two communities is not only that they speak different "dialects" wich distinctive formal properties, but that they have been socialized to use language differently and have gone through qualitatively different learning processes. Her contention is that language does not necessarily have to be "taught" in order to be learned, nor is it simply an emergent, innate ability. Rather, it is the entirety of one's social structure and its assumptions, relationships, and meaning systems that contribute to how a child goes about acquiring the language(s) of his or her community. The language environment, then, does have an effect, and a major one, but its effects are mostly implicit in the structuring of situations rather than through explicit teaching-learning interactions. Exposure itself is critical, but so are conceptions of the child and of language, as reflected in the interactions between children and other members of their community. This, too, is the approach of Ochs and

Schieffelin, who underline this in their discussion of culture:

> Our position is that culture is not something that can be considered separately from the accounts of caretaker-child interaction; rather, it is what organizes and gives meaning to that interaction. This is an important point, as it affects the definition and interpretation of the behaviors of caretakers and children. How caretakers and children speak and act toward one another is linked to cultural patterns that extend and have consequences beyond the specific interactions observed. (Ochs & Schieffelin, 1984, p.284)

For the Kaluli speakers of the southern highlands of Papua New Guinea that Schieffelin worked with in the late 70's, children are not directly spoken to, nor are they exposed to much face-to-face gazing with their caretakers for the entire first year of their lives. They do, however, receive "speaking parts" in greeting and empathy-inducing conversations with their older siblings in which the mother provides the words and moves the baby up and down accordingly. It is not until they reach 6 to 12 months of age, when held in the arms or on the shoulders of their mother or older siblings, that they even begin to be greeted by adults and receive one-line imperatives to initiate or control their actions. At this time, the infant's actions are also commented on by older children and adults, but in utterances directed towards the mature speakers present rather than towards the infant. It is only when infants begin to produce the words for "mother" (no) and "breast" (bo) that Kaluli speakers refer to the beginnings of language in their children. Once this point has been reached, Kaluli speakers begin to "show" (cf. Schieffelin, 1979) and teach their children how to speak through ElEma ("say like that") sequences. The example that follows contains two such utterances that are part of a longer interaction between the mother and Wanu, who is 27-months-old and is being taught to express his disapproval of Binalia'a (age 5) actions:

Mother: AbEnowo?! ElEma.

(Whose is it?! say like that)

Wanu: AbEnowo?!
(Whose is it?)

Mother: GEnowo?! ElEma.
(Is it yours?! say like that)

Wanu: GEnowo?!
(Is it yours?!)

Typical ElEma sequences, according to Schieffelin, are triadic, involving the mother, her 20- to 36-month-old child, and other participants. Moreover, they focus specifically on teaching assertive strategies (teasing, shaming, requesting, reporting) and on language use for social interactions. Mothers do not use this strategy to label objects, however, as is normal in white, middle-class English speaking families, nor do they use it to teach children how to beg for food or objects, which they consider to be natural for children. Kaluli speakers also do not expand upon or make great attempts to clarify their children's utterances, nor do they use a baby-talk lexicon at any phase in their children's developments. They do correct the phonetic and syntactic forms, as well as the meanings of children's utterances. In this way, Kaluli speakers feel that they can help their children through the "hardening" process of development and in becoming mature speakers of the language who know how to produce linguistic utterances appropriate to their listeners.

Speakers of Samoan, also, do not show the typical "motherese" characteristics in their speech to children. Rather, in the first 5 to 6 months, infants are kept in close proximity to their mothers and hear much speech about their physiological states or needs being noticed and addressed to others. They also receive direct addresses, but only in the form of songs and "rhythmic vocalizations in a soft, high pitch" (Ochs & Schieffelin, 1984;

Ochs, 1988). Once infants become mobile, much more language is directed towards them, but still mostly in the form of directives and imperatives. Caretakers do not "converse" with the child, however, as children are not yet conversationalists, nor are they high enough on the social hierarchy to be deserving of conversation[6].

Samoan children, in contrast to the Kaluli speaking children of Papua New Guinea, are seen as being highly assertive and aggressive, thus producing the curse tae ("shit") as their first word. They, too, however, are instructed in certain speech acts such as the literal reporting of messages, and in greeting and noticing others, especially higher status individuals.

Samoan speakers also distinguish between two speech styles: "proper" speech and "bad" speech. "Proper" speech is used primarily in formal settings such as school and with social outsiders, regardless of their status, and contains more phonetic distinctions and more grammatical markers than everyday, "bad" speech. One grammatical feature, the ergative case marker, shows rather dramatic changes in use across different discourse situations. It appears most often (28% of the time) in the formal language of titled men at village council meetings, and least frequently (4% of the time) in the informal language of women speaking to their female peers or to children. Although this is not a feature specific to adult-to-child speech, the variable use of the marker does result in rather late acquisition of this form by Samoan child speakers. Kaluli speakers, on the other hand, use a very similar structure to mark the ergative, but do so much more

[6] Consider the contrast between Samoan families in which babies are not worthy of conversation and Heath's Roadville families, for whom the new baby is a good excuse to pay social visits to friends and releatives.

consistently. As a result, this structure is acquired much earlier by Kaluli speaking children than their Samoan counterparts (see Ochs, 1988, for a comparison of linguistic differences between the two languages).

Summary

The focus of all three of these studies in "language socialization" has been on language use (pragmatics and discourse) rather than language structure (syntax), and in how children come to "know" the broader meanings of language and its communicative potentialities. The one question that none of these studies has addressed in detail, however, is the question of syntax and how it comes to be acquired. It is the variations of syntax and, more importantly, meaning (semantics) across situations and speakers that held the most striking and immediate relevance for these language communities and thus became the focus of research. Only in Och's accounting of the delayed ergative marker in Samoan children's speech do we get closer to an asking of the syntax question. Does that mean, by default, that syntax is innate and that environmental input is only relevant to the surface details of specific languages and to the learning of vocabular and pragmatic mastery? The language socialization approach would argue not, but in their search for more interesting and "relevant" data, they have not provided the details of syntactic use and development needed to answer this question. And, given the failure to give a fuller consideration of the linguistic environment in the detail necessary to disconfirm an "innate syntax" hypothesis, neither has the psycholinguistic literature. The question thus remains.

IV. Synthesis and Conclusions

In both the language acquisition and language socialization approaches,

we are asking questions about how we develop from preverbal infants to eloquent adults. What are the mechanisms or interactive processes that we use as human beings to recreate in each and every one of us the languages and cultures of our communities? How much of this is innate? How much of it is learned? And how are the learned components learned and the innate components emerged?

Psycholinguistics has provided for us the statement of a problem: How does a child acquire language? And, it has provided a source of data and tentative hypotheses about the effects of "motherese". Anthropology, and the language socialization approach, have shown us that "motherese", or even "caretakerese", does not exist as such in many cultures of the world. If anything, say the ethnolinguists, it is simply one way in which caretakers can interact with their children; a culturally-defined way that depends on the broader epistemologies and social histories of the group at hand.

What do we make of these differences? In order to come to any sort of a resolve about these two independently collected sources of data and these two "world views" on the nature of researching language and its development, we need something of a restatement of the problem and a restatement of what is considered valid as "environmental evidence" on the one hand and parent and child "language" on the other.

In our reformulation of what constitutes valid evidence for demonstrating the effects (or noneffects) of the environment on the development of child language in the psycholinguistic literature, I suggest that we go beyond a mere mechanical search for correlates in adult syntax to a consideration of at least the semantics and pragmatics of utterances, and perhaps a consideration of discourse and shared world views evident in the

structuring of communications and their cultural participants. In Cazden's (1988, p.293) words, I am suggesting, at the least, that we undertake a "systematic cross-cultural comparison of environmental assistance that is methodologically comparable to Slobin's cross-linguistic research on acquisition sequences". Moreover, I am suggesting that this comparison also be sensitive to issues of culture in an integral, rather than a tangential way. For while a logical argument about the "syntax question" may be sufficient for a tightly constrained problem space, the realities of human existence and human language use suggest that an empirical approach to answering the question of a human child's acquisition of syntax, and many other aspects of language, may be more important. By "empirical", I mean an approach that considers a broad range of data, including cultural and even ideological meaning systems, to answer highly specific questions such as the acquisition of "language" in general and of specific syntactic features in particular.

Conversely, in our reformulation of what constitutes "parent and child language" in the language socialization literature, we must not forget that there are grammatical features that operate with regularity in linguistic communities and that these can be examined in detail and at different times in an individual child's development. Moreover, just as the institutional structures of a culture and its general ideology may be reflected in and determine variations in language use and acquisition, it is conceivable that innate, genetic factors may also have a role in determining some patterns in children's language use.

I am suggesting that it is only through an eclectic combination of the two approaches that we can actually address issues like the "syntax question"

and begin to move towards some answers. Such a combination of approaches would perhaps be an enticing beginning towards a culturally-sensitive psychology, if not necessarily a "cultural psychology" in the sense intended by Shweder (1990) and his colleagues. This particular version of a cultural approach would not necessarily mean an end to the questions of "universals" and their development across different cultural and social systems. Rather, I am arguing that we incorporate into key questions of development the means for achieving sound conceptualization both of our biological foundations and of our sociocultural environments. The aim of such an approach would not be to provide definitive answers to those omnipresent questions of nature versus nurture, only to offer the conceptual and methodological tools to gather the data for a fuller consideration of our environments --linguistic and otherwise.

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